2: Jochelson E-5 (1884-1902) 1933 Yakut

pairs of bellows are employed. Welding is not perfectly accomplished and traces of the process are visible. Nevertheless some native blacksmiths near Yakutsk have learned from Russian artisans the art of fluxing and tempering iron. From their own steel, they make files, axes, knives, spears, and other implements sufficiently hard, but they do not know how to forge springs. Until recently they did not know how to cut screws and to drill iron. Now they use Russian screw plates and the screw is called by the Russian name *bint* (in Russian *vint*) or *nuchasuola*, Russian path. Holes are pierced instead of being drilled. They do not know how to cast iron and call it by the Russian name, *djugun* (Russian, *chugun*). Knives made of native iron may be easily distinguished by their softness and flexibility from the hard knives of Russian manufacture.

It is of interest to note that the Tungus as well as the Yukaghir blacksmiths of Yakutsk Province now use the Yakut double bellows while the Tungus of the Okhotsk District use the single bellows of the Russians. The Tungus do not know how to obtain iron from ore and they forge Russian or Yakut iron rods.

Weapons and Tools. The bifurcated iron arrow point (*cŷra*) and the bifurcated bone arrow point (*muos cŷra*) are characteristic of the Yakut. The following are the iron weapons formerly used in war and hunting though at present they are restricted to hunting.

The *bolat*, an ancient iron sword, has a blade 14 cms. long, sharpened on one edge and curved in the direction of the point. The back is straight and thick, though somewhat thinner near the point. The sides are ornamented with engravings, inlaid with copper and brass. The name *bolat*, however, seems to be the ancient Russian word, *bulat*, for sword. The *bolat* has a short iron or bone handle.

The *batas* or war lance (Fig. 55*b*) has a blade about half a yard long; its greatest width is 1.5 inches. One edge is sharpened. The *batas* has a shaft of birch wood about 1.5 meters long. At present the *batas* is used in hunting bears. Like *bolat*, *batas* does not seem to be a Turkic word. It is known among the Russianized natives in Kamchatka and on the Kolyma River. I could not learn the original Yakut word for this weapon. The Yakut call a saber, *sābyla batas*, but *sābyla* is the Russian word (*sablya*) for saber.

A short, thick knife attached to a birch handle, *batyya*, the diminutive of *batas* is used in hunting and was formerly used in war. It was hung on the arm by a leather thong and regarded as a reserve weapon.

Of other Yakut iron implements the knife (*bysax*, from *bys*, to cut; Turkic, *bychak*) may be distinguished (Fig. 56*a*, *c*). It is not large, sel-

2: Jochelson E-5 (1884-1902) 1933 Yakut

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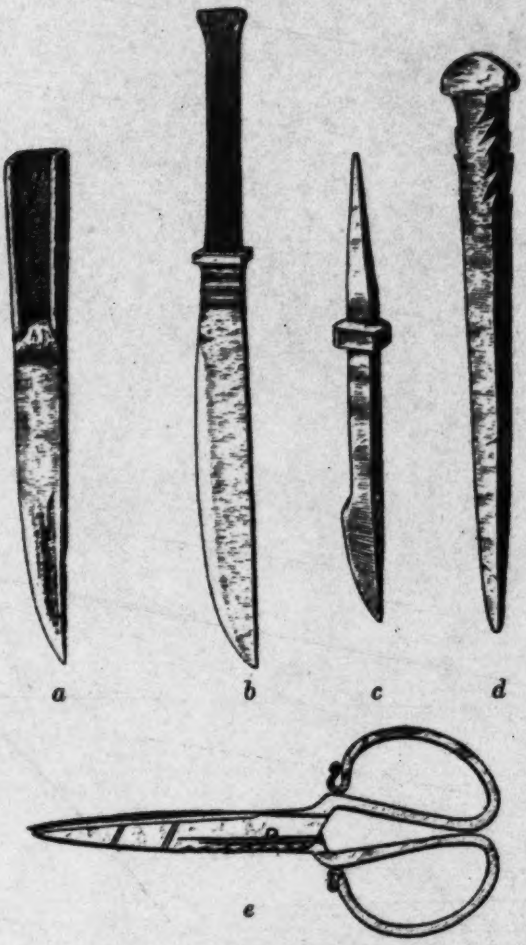

Fig. 55 (70-9302, 9644, 8791, 9305, 9157). Metal Tools. *a*, Ice pick head; *b*, War spear; *c*, Ice pick; *d*, Harrow tooth; *e*, Scissors.

2: Jochelson E-5 (1884-1902) 1933 Yakut

grass. The Yakut adopted the use of the scythe (*nūchcha xotūra*, Fig. 58) from Russian settlers. 412

Armor. Warriors used armor which consisted of small iron plates fastened to a leather coat and was called *kuyax*. The Chukchee and Koryak 713

Fig. 59

Fig. 60

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Fig. 59 (70-8532). A Composite Double-Curved Bow, reinforced with Bark and Sinew.

Fig. 60 (70-8511). An Iron Hand and Arm Protector for use with a Bow.

iron armor described by Bogoras and myself was undoubtedly adopted from Yakut sources, perhaps through Tungus intermediaries. Formerly their armor consisted of bone plates fastened to the skin coat. Gmelin[1] says that the Kirghiz who, like the Yakut, are of Turkic origin had armor 713

[1]Gmelin, Johann Georg, *Voyage en Sibérie, Contenant la Description des Mœurs et Usages des Peuples de ce Pays, le Cours des Rivières considerables, la Situation des Chaines de Montagnes, des Grandes Forêts, des Mines, avec tous les faits d'Histoire Naturelle qui sont particuliers a cette contrée.* Traduction libre de l'Original allemand, par M. de Keralio. 2 vols. Paris, 1767.

2: Jochelson E-5 (1884-1902) 1933 Yakut

713 similar to that of the Yakut. A bow is illustrated in Fig. 59 and a hand and arm protector in Fig. 60.

701 Yakut warriors (*sāpi, sāpi kisila*) were usually mounted horsemen
● 411 (*minjār*), but there were also foot soldiers (*satȳkisila*). Their weapons (*sāp*) consisted of a light bent bow (*sā*), a quiver (*kāsāx, sādax*), and arrows (*aya*)[1].

326 *Social Position of the Yakut Blacksmith.* The Yakut blacksmith
614 (*ūs, timir ūsa, timirjit*) has the same rank as a shaman (see p. 107).
757 According to one tradition the forefather of the Yakut, Elliei, was the
789 first blacksmith. Another traditional blacksmith, named Chyky, was
562 the teacher of warriors. He forged weapons for them and gave advice. Smithing and iron mining are inherited in certain clans. Some clans are composed of miners and iron founders, while others are smiths. The Yakut believe that blacksmiths are able to cure sick people by natural means and not through the assistance of spirits, as do shamans. They are regarded as clever, intelligent, and experienced. A blacksmith of the ninth generation is believed to possess some supernatural power. Such an individual has no fear of evil spirits and can forge the iron pendants for a shaman's garb without danger to himself. Spirits are generally afraid of the rattling of iron and the noise produced by the smith's bellows. It is of interest to note that there are no women blacksmiths, while, on the contrary, women shamans, called *udahan*, are believed to be more powerful than men shamans.

326 Among all Siberian natives the blacksmith ranks high. His voca-
[554] tion is not regarded as a trade which may be learned by any one but as a divine gift. He is protected by special spirits. Among many African tribes the blacksmith is represented among the officers of the court. In Shugnan and other places in Pamir, the blacksmith's art is regarded as a gift from the prophet David. He is more revered than the *mulla* (literate man who is able to read the Koran). His assistants as well as any onlookers must show respect to the master and his implements. The blacksmith must be clean spiritually and physically; he must avoid evil thoughts and deeds and must wash before beginning to work.
[778] The smithy is venerated as a place of worship and when there is no special building for prayers and social gatherings, the smithy takes its place. During communal feasts the anvil is treated with sour milk.[2]

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[1]Arrows had names differing in accordance with their shape and material: thus, *kustuk*, a single pointed iron or bone arrow; *cyca*, a bifurcated arrow; *onohos*, a spear-like bone arrow; *mallar onohos*, an arrow with a rounded head of bone or wood, used for squirrel hunting that the skin may not be defaced.

[2]Sarubin, J., Légende du Sugnan sur le premier Forgeron (*Bulletin de l'Académie des Sciences de l'USSR*, Series 6, Vol. 20, Part 2, pp. 1165–1170, Leningrad, 1926, in Russian).

6: Sauer--130 [2] G-5 (1785-94) 1802 Yakut
116, 221, 251, 411, 224

"About the 25th of June, at the conclusion of their holidays, they commence their summer occupation by collecting a great supply of the inner bark of the pine and birch, which they dry on racks in their huts: hay-making and fishing then occupy the time till berries are ripe, when they collect an immense quantity, and boil to preserve them. In the beginning of October they kill their winter stock of cattle for food, and let it freeze, which preserves it fresh and good; of course they save so much hay. In October and November they catch fish under the ice. Toward the end of the latter month, they go out on the chase: for wolves and foxes they place in their tracks poisoned baits of corrosive sublimate, which they call sullima, and also of nux vomica (Tshillebucha); besides having traps set, spring bows, &c. They are very expert archers, and have a plentiful supply of arrows in their quivers."

17: Erman--265 N-3 (1828-29) 1850 Yakut
116, 177, 224, 411

"The ermine-traps, which the Yakuts of Delgeisk showed me, prove that, at some time or other, important traditions have found their way from Obdorsk to this part of the Lena. They corresponded perfectly with the yugel, as they are called, or self-shooting bows, which I found in use for the same purpose in Kunduvansk; the only difference being that the opening for the ermine is circular in the Ostyak trap, and square in that of the Yakuts. It cannot be assumed that two inventors, independently of each other, hit upon the same mechanical contrivance, which is by no means simple."

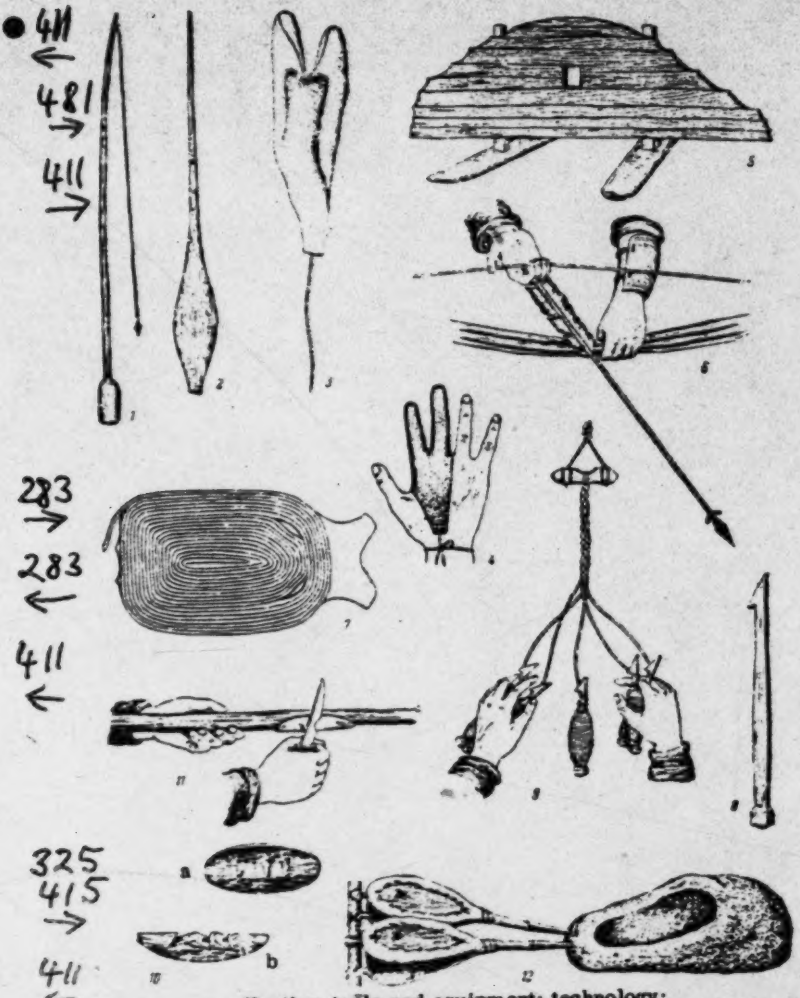
[p. 251]

227

411

A. Fishing implements: 1—scoop for removing ice from hole; 2—horse-hair net for catching lake fish; 3—stick with hole through which net is lowered through hole in ice.

B. Old-type weapons of 18th century. 1—sword; 2—sheath for sword; 3—pike; 4—arrow with iron forked tip; 5—arrow with spear-shape tip; 6—arrow with iron three-forked tip; 7—belt with quiver; holder for bow and arrows.



Hunting tools and equipment; technology:
1—flexible stick with cord for releasing a throwing arrow; 2—wooden throwing arrow; 3, 4—glove worn for archery; 5—shield on skis for hiding the hunter; 6—method of protecting the hand during archery; 7—method of cutting a spiral strip from reindeer-skin; 8—wooden hook for braiding lasso; 9—method of braiding lasso; 10a, b—wooden knife holder with holes for blades; 11—method of using knife holder; 12—clay kiln with blacksmith's bellows.

involved concealment: the hunters skillfully approached the herd behind a shield erected on runners. In the winter the hunters put on white coats with chestpieces made of white dogskin, enabling them to crawl over the snow